REMARKS

Claims remaining in the present patent application are numbered 1-6, 8-14, and 16-23. Claims 7 and 15 have been canceled. The rejections and comments of the Examiner set forth in the Office Action dated June 9, 2006 have been carefully considered by the Applicants. Applicants respectfully request the Examiner to consider and allow the remaining claims.

Telephone Conference

On September 9, 2006 and on or about September 13, 2006, Applicants' attorney, Lin C. Hsu, and Examiner Wang conducted telephone conferences. During the telephone conferences, Examiner Wang and Mr. Hsu discussed making specific amendments to the Claims of the present Application to more particularly point out and distinctly claim inventive aspects of the present invention.

Applicants wish to thank Examiner Wang for taking time to discuss the Claims of the Application.

35 U.S.C. §103 Rejection

The present Office Action rejected Claim 1 under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. (U.S. Patent No. 6,140,992), in view of Kim et al. (U.S.

Patent No. 5,355,443), and Singla et al. (U.S. Patent No. 6,597,373), and Dinwiddie et al. (U.S. Patent No. 6,195,078). Also, Claims 2-4, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. in view of Kim, Yuki et al. (U.S. Patent No. 5,805,149), further in view of Ogawa et al. (U.S. Patent No. 6,018,331) and Singla et al. and Dinwiddie et al. Further, Claims 5, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. in view of Kim et al. and Yuki et al. and Singla et al. and Dinwiddie et al. Moreover, Claims 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. in view of Kim et al., and further in view of Ogawa et al., and Singla et al. and Dinwiddie et al. Also, Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. in view of Kim et al. and Yuki et al., further in view of Ogawa, Singla, Dinwiddie et al. and He et al. (U.S. Patent No. 6323,849).

Applicants have reviewed the above cited references and respectfully submit that the present invention, as recited in Claims 1-6, 8-14, and 16-23, is neither anticipated nor rendered obvious by the Matsuzaki et al. reference taken alone or in combination with the Singla et al., Kim et al., Dinwiddie, Yuki et al., Ogawa et al., and He et al. references.

Independent Claims 1, 10, and 18

Applicants respectfully point out that embodiments of the present invention as claimed in amended independent Claims 1, 10, and 18 each recite, in part:

> a rectangular pixel frame buffer region; and
> a fixed, active pixel border region permanently dedicated to displaying a border attribute, wherein said fixed, active pixel border region surrounds said rectangular pixel frame buffer region and comprises a width of two pixels . . .

Specifically, the claimed embodiments of the present invention pertain to a controllable pixel border that surrounds a frame buffer region for improved viewability of a display device. That is, the fixed, active pixel border permanently displays a border attribute. For instance, the pixel border is useful for increasing viewability, e.g., contrast, of images and/or characters that are displayed along the edge of a frame buffer region.

In particular, embodiments of the present invention as claimed in independent Claims 1, 10, and 18, recite, unlike the prior art references, a controllable fixed, pixel border region comprising a width of two pixels, and a display unit that comprises a border attribute register. The border attribute register is *dedicated* for containing a border attribute for the pixel border region. That is, the fixed, pixel border region is *permanently dedicated* to display the border attribute. Additionally, the border attribute stored

in the border attribute register is equal to a background attribute currently being displayed. This allows for good blending of the border with the background color, while still giving good contrast to any edge displayed characters, as an example.

Obviousness can only be established by combining or modifying the teachings of the references cited to produce the claimed invention where there is some teaching, suggestion or motivation to do so found in either the references or themselves or knowledge generally available to one of ordinary skill in the art. MPEP 2143.01, para. 3; In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Applicants respectfully note that none of the cited prior art references teach the fixed, active pixel border region that is *permanently dedicated for displaying a border attribute that is equal to a background attribute currently being displayed*. In addition, Applicants respectfully note that none of the cited prior art references teach the fixed, active pixel border region comprising a *width of two pixels*. Also, Applicants respectfully note that none of the cited prior art references teach the border attribute being *automatically selected to provide viewing contrast* with image data near the border region. Specifically, the Matsuzaki et al. reference taken alone or in combination

with the Singla et al., Kim et al., Dinwiddie, Yuki et al., Ogawa et al., and He et al. references does not teach or suggest the controllable, fixed, active pixel border region of the present invention.

In particular, Applicants respectfully note that the prior art reference, Matsuzaki et al., does not teach nor suggest a controllable, fixed, active pixel border region of the present invention. The Matsuzaki et al. reference teaches a border producing circuit which prevents transmission of the horizontal synchronizing signal for a predetermined period when the display state has changed. However, the Matsuzaki et al. reference teaches that a display state can change, and as such does not teach a fixed, active pixel border region, as is recited in independent Claim 1. Moreover, the Matsuzaki et al. reference does not teach a fixed, active pixel border region which comprises a width of two pixels, as recited in independent Claim 1. Further, it is admitted that it is not implicitly clear whether the Matsuzaki et al. reference teaches a frame buffer, or teaches a display attribute being selected to provide viewing contrast with image data located near the border region. As such, Applicants respectfully assert that the Matsuzaki et al. reference does not teach or render obvious a display attribute register that is permanently dedicated for containing a border attribute used for a fixed, active pixel border region comprising a width

of two pixels. In summary, the Matsuzaki et al. reference does not teach a border attribute register dedicated to containing a border attribute permanently displayed in a fixed, active pixel border region, comprising a width of two pixels, wherein the border attribute is equal to a background attribute currently being displayed, as is recited in independent Claims 1, 10, and 18 of the present invention.

Additionally, the Singla et al. reference fails to remedy the shortcomings of the Matsuzaki et al. reference. The Singla et al. reference teaches a display controller that is adapted to generate image borders surrounding images within variably sized and located frames on a display device. The image border data is represented by a single color. However, nowhere in the Singla et al. reference is taught a border attribute register that is dedicated for containing a border attribute. That is, the Singla et al. reference does not teach a border attribute register containing a border attribute permanently displayed in a fixed, active pixel border region, as recited in independent Claim 1. Additionally, the Singla et al. reference does not teach a fixed, active pixel border region comprising a width of two pixels, as recited in independent Claim 1. Moreover, the Singla reference does not teach a border attribute register dedicated to containing a border attribute that is equal to a background attribute currently being displayed.

In summary, Applicants respectfully assert that the Singla et al. reference does not teach a border attribute register dedicated to containing a border attribute permanently displayed in a fixed, active pixel border region, comprising a width of two pixels, wherein the border attribute is equal to a background attribute currently being displayed, as is recited in independent Claims 1, 10, and 18 of the present invention.

Moreover, the Dinwiddie et al. reference fails to remedy the shortcomings of the Matsuzaki et al. and Singla et al. references. The Dinwiddie et al. reference teaches a parallel mode on-screen display (OSD) system that includes a fringe palette which produces a fringe color data signal. The Dinwiddie et al. reference teaches a fringe palette that is used to obtain or produce one of multiple color entries, as in the background palette. However, Applicants respectfully assert that the parallel mode OSD system in Dinwiddie does not teach a fixed, active pixel border region permanently dedicated to displaying a border attribute. Instead, the OSD system in the Dinwiddie et al. reference may choose to display an image in the border region when OSD is not being generated, or a border when OSD is being generated. As such, in the Dinwiddie et al. reference, a pixel may display both an image, or a border depending on whether OSD is generated, which is in direct contrast to a fixed, active pixel border region permanently dedicated to

displaying a border attribute, as is recited in independent Claim 1 of the present invention. Furthermore, the Dinwiddie et al. reference does not teach a fixed, active pixel border region that comprises a width of two pixels. Moreover, nowhere does the Dinwiddie et al. reference teach that the border attribute is the same as the background attribute currently being displayed. Thus, Applicants respectfully assert that the Dinwiddie et al. reference does not teach a border attribute register dedicated to containing a border attribute permanently displayed in a fixed, active pixel border region, comprising a width of two pixels, wherein the border attribute is equal to a background attribute currently being displayed, as is recited in independent Claims 1, 10, and 18 of the present invention.

Moreover, each of the Kim et al., Yuki et al., Ogawa et al., and He et al. prior art references fails to overcome the shortcomings of the Matsuzaki et al., Singla et al. and Dinwiddie et al. references. Specifically, these additionally references also do not teach, suggest, or disclose a border attribute register dedicated to containing a border attribute permanently displayed in a fixed, active pixel border region, comprising a width of two pixels, wherein the border attribute is equal to a background attribute currently being displayed, as is recited in independent Claims 1, 10, and 18 of the present invention.

Thus, Applicants respectfully contend that embodiments of the present invention as claimed in independent Claims 1, 10, and 18 are neither anticipated nor rendered obvious by the Matsuzaki et al., taken alone or in combination with the Singla et al., Kim et al., Dinwiddie et al., Yuki et al., Ogawa et al., and He et al. references, and are in a condition for allowance. As a result, Applicants respectfully submit that Claims 2-6, 8, and 9 which depend from independent Claim 1, as currently amended, are also in a condition for allowance as being dependent on an allowable base claim. Also, Applicants respectfully submit that Claims 11-14, 16, and 17 which depend from independent Claim 10, as currently amended, are also in a condition for allowance as being dependent on an allowable base claim. Further, Applicants respectfully submit that Claims 19-23 which depend from independent Claim 18, as currently amended, are also in a condition for allowance as being dependent on an allowable base claim.

CONCLUSION

In light of the facts and arguments presented herein, Applicants respectfully request reconsideration of the rejected Claims.

Based on the arguments presented above, Applicants respectfully assert that Claims 1-6, 8-14, and 16-23 overcome the rejections of record. Therefore, Applicants respectfully solicit allowance of these Claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

Wagner, Murabito & Hao LLP

Date: Oct 10, 2006

Anthony C. Murabito
Reg. No.: 35,295
Two North Market Street
Third Floor
San Jose, California 95113